Environmental Assessment

North Fork of the Big Hole Riparian Fence Project



Environmental Assessment MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Montana Fish, Wildlife & Parks (FWP) is proposing to provide funding and implement a project to construct approximately 46,000 feet of riparian fence, 5,800 feet of 3-strand electric pasture fence, and 3,900 feet of barbwire pasture fence along a 4.5 mile stretch of the North Fork of the Big Hole River. The intent of this project is to enhance the native riparian vegetation that will stabilize banks, provide cover, benefit stream function, and enhance fish and wildlife habitat. Installation of the riparian and pasture fence will create a multiple pasture rotational grazing system which in time will improve riparian vegetation to benefit fish and wildlife species. This project will specifically improve habitat for fluvial (river dwelling) Arctic grayling, a species of special concern, as well as numerous other fish and wildlife species within this reach of the North Fork.

2. Agency authority for the proposed action:

Montana Fish, Wildlife & Parks (FWP) is required by law to implement programs that manage sensitive fish species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list species under 87-5-107 or the federal Endangered Species Act. Section 87-1-201(9)(a), M.C.A.

3. Anticipated Schedule:

Estimated Construction Commencement Date: September 2009

Estimated Completion Date: December 2009

Current Status of Project Design (% complete): 90% complete

4. Location:

The project site is located on property owned by John and Phyllis Erb (T1S, R15W, Sections 31, 32, 33 and T2S, R15, Section 5) and a State Trust parcel managed by Montana Department of Natural Resources and Conservation (DNRC). The State Trust Parcel is located at T1S-R16W Section 36. The Project is located approximately 6 miles west of the community of Wisdom in Beaverhead County (Figure 1).

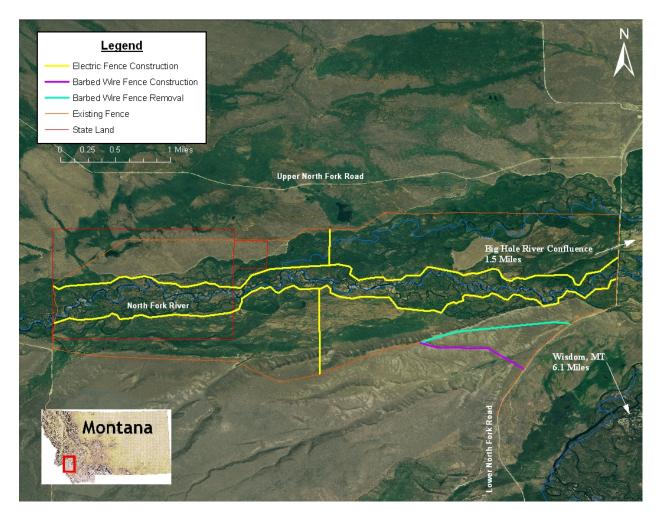


Figure 1. North Fork of the Big Hole River Riparian Fence Project located west of Wisdom, Montana.

5. Project size:

<u>Acres</u>		<u>Acres</u>
0	(d) Floodplain	0
<u>0</u>	(e) Productive:	
	•	0
0	Dry cropland	0
	Forestry	0
<u>560</u>	Rangeland	0
	Other	0
	0 0	(d) Floodplain 0 0 0 (e) Productive: Irrigated cropland Dry cropland Forestry Rangeland

6. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) **Permits:** permits will be filed at least 2 weeks prior to project start.

Agency Name Permits
NA

(b) Funding:

Agency Name Funding Amount

Montana Fish, Wildlife & Parks Approximately \$ 80,000

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name Type of Responsibility

Montana Department of Natural Resources Trust Land Management and Conservation

7. Narrative summary of the proposed action:

The upper Big Hole River Basin supports the last fluvial Arctic grayling population in the lower 48 United States. Fluvial arctic grayling are classified as a "species of special concern" by FWP because of their reduced abundance and diminished distribution.

A degraded native riparian vegetation community, limited pool habitats, eroding stream banks, and an over-widened channel characterize the 4.5-mile reach on the North Fork of the Big Hole River within this project. The existing degraded conditions are primarily due to the absence of the infrastructure to manage livestock and the impacts of grazing on vegetation within the riparian corridor. The degraded channel and riparian conditions are currently providing marginal habitat for fluvial Arctic grayling and other aquatic species.

The project objectives are to improve the native riparian vegetation community which will stabilize streambanks, reduce streambank erosion, and over time, narrow and deepen the stream channel producing complex, high quality fish habitat. Carrying capacity and overall numbers of grayling and other native and sportfish species are expected to improve.

The treatments involved in the project include: 1) Installing 46,000 feet of 3 strand high tensile riparian electric fence and 2) constructing 5,800 feet of 3 strand high-tensile electric pasture fence, 3) removing 5,200 feet of barbwire fence, and 4) constructing 3,900 feet of barbwire fence.

The riparian and pasture fences will be used to facilitate a grazing management plan that will enhance riparian vegetation by creating five riparian and upland pastures which will allow the landowner and lessee to rotate livestock through each pasture. Each pasture will receive annual periods of rest that will allow vegetation to recover and improve plant species diversity. The end results will be improved riparian health which benefits channel function and habitats for numerous fish and wildlife species. The 3-strand high-tensile electric riparian

fence is designed for wildlife to easily traverse the fence to access important habitats and corridors (Paige 2008) with the top wire height of 42 inches and the bottom wire height of 18 inches. The electric fence will only be turned on when livestock are using the new or adjacent pastures.

Approximately 5,200 feet of degraded barbwire fence will be removed and replaced with 3,900 feet of barbwire fence. This fence is located on an upland pasture. Antelope are the most common species moving through this pasture. The new barbwire fence bottom wire height is 16 inches, and top wire height is 46 inches. The new fence design is an improvement from the old degraded fence, will benefit wildlife movement, and will meet the goals for livestock management. Gates will be opened on all of the new fences when livestock are not using the pastures.

All of the private land and the state lease land are enrolled in the Big Hole Arctic Grayling Candidate Conservation Agreement with Assurances Program (CCAA). Under this program, a site-specific conservation plan is developed with each landowner that includes management objectives for riparian areas. As part of the site-specific conservation plans, FWP will develop a grazing management plan with the landowner which includes noxious weed management and a monitoring plan. The CCAA requires FWP to conduct compliance monitoring biannually. This project will be followed by channel and bank restoration project scheduled for 2011. Funding for this project is through State Wildlife Grants (SWG). The SWG funding is allocated to species or focus areas identified in Montana's Comprehensive Fish and Wildlife Conservation Strategy (CFWCS).

10. Alternatives:

Alternative A: No Action

Under this alternative, the grazing management in the stream corridor and riparian area will not change, and the landowner and lessee will not have the infrastructure to implement a grazing management plan that will benefit riparian health, stream channel function, and fish and wildlife habitats. The carrying capacity for fluvial Arctic grayling and other species of fish will remain below potential.

Alternative B: Proposed Action

The proposed alternative is designed to enhance the overall aquatic and riparian habitat within a 4.5-mile reach of the North Fork of the Big Hole River. Fluvial Arctic grayling, as well as other native and sportfish species, will benefit by protecting the riparian corridor with the newly constructed fence, development of a grazing plan, and re-establishing a healthy riparian corridor. Numerous fish, wildlife, avian, and amphibian species that rely on high quality stream and riparian habitats will also benefit from the restoration project.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

1. Evaluation of the impacts of the <u>Proposed Action</u> including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. **Soil instability or changes in geologic substructure?		Х					
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?		Х					
c. **Destruction, covering or modification of any unique geologic or physical features?		Х					
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		Х					
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		Х					

Comments: The installation of the proposed electric and barbwire fences will require the disturbance of soils in the immediate area of the location of the fence posts. Although the placement of the post does require some digging, the installation efforts will not require changes to unique geological or physical features of the river corridor. After the completion of the fencing effort, over time riparian vegetative health is expected to improve and assist in stabilizing the riverbanks which will decrease the level of sediment into the river.

2. AIR	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			х				
b. Creation of objectionable odors?		Х					
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		х					
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		Х					
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		N/A					

Comment 2a. The proposed action includes the use of heavy equipment that may temporarily increase emissions and reduce air quality. All equipment will be properly maintained to reduce any short-term changes to the air quality.

			ı	MPACT *		
3. WATER Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		х				
b. Changes in drainage patterns or the rate and amount of surface runoff?		Х				
c. Alteration of the course or magnitude of floodwater or other flows?		х				
d. Changes in the amount of surface water in any water body or creation of a new water body?		х				
e. Exposure of people or property to water related hazards such as flooding?		х				
f. Changes in the quality of groundwater?			Х		No	3f
g. Changes in the quantity of groundwater?			Х		No	3g
h. Increase in risk of contamination of surface or groundwater?		х				
Effects on any existing water right or reservation?		х				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		Х				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		х				
I. **** <u>For P-R/D-J</u> , will the project affect a designated floodplain? (Also see 3c.)		N/A				
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		N/A				

³f. By constructing the proposed riparian fence and developing a rest-rotation grazing system within this reach of the North Fork of the Big Hole River, the riparian vegetation will improved because of a reduction of livestock grazing pressure and disturbances. In time, the riparian vegetation is expected to stabilize riverbanks, reduce sediment, provide shade and cover, improve groundwater storage, and improve water quality for aquatic species.

³g. By constructing the proposed riparian fence and developing a rest-rotation grazing system within this reach of the North Fork of the Big Hole River, the riparian vegetation will improved because of a reduction of livestock grazing pressure and disturbances. In time, the riparian vegetation is expected to stabilize riverbanks, reduce sediment, provide shade and cover, improve groundwater storage, and improve water quality for aquatic species.

4. VEGETATION	IMPACT *							
Will the proposed action result in?	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			Х		No	4a.		
b. Alteration of a plant community?			Х		No	4b.		
c. Adverse effects on any unique, rare, threatened, or endangered species?		Х						
d. Reduction in acreage or productivity of any agricultural land?			Х		No	4d.		
e. Establishment or spread of noxious weeds?			Х		Yes	4e.		
f. **** <u>For P-R/D-J</u> , will the project affect wetlands, or prime and unique farmland?		N/A						

Comment 4a. The project seeks to promote native vegetation in the riparian corridor within the project area. The riparian fence will provide the infrastructure to implement a grazing management plan where livestock is rotated through the riparian corridor. The riparian fence will reduce the duration of grazing in the riparian corridor. This will be offset by increased forage production from rest, recovery, and improved plant vigor of the native forage species.

Comment 4b. The project seeks to re-establish native vegetation species in the riparian areas within the project area. The riparian fence will promote recovery of native species. To construct the riparian fence, a swath of willows (approximately 5,000 linear feet x 10 ft wide) may have to be removed. The overall diversity of plant species in the area will not be affected.

Comment 4d. The project seeks to promote native vegetation in the riparian corridor within the project area. The riparian fence will provide the infrastructure to implement a grazing management plan where livestock is rotated through the riparian corridor. The riparian fence will reduce the duration of grazing in the riparian corridor. This will be offset by increased forage production from rest, recovery, and improved plant vigor of the native forage species.

Comment 4e. The project will include ground-disturbing activities that may result in the establishment of noxious weeds. The potential for this dynamic to occur will be recognized and reduced by cleaning vehicles and equipment entering and leaving the project site. A management plan is also being developed for the project site to control and eliminate noxious weeds after construction of the project under the guidance of FWP's Integrated Noxious Weed Management Plan.

** 5. FISH/WILDLIFE	IMPACT *							
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index		
a. Deterioration of critical fish or wildlife habitat?		Х						
b. Changes in the diversity or abundance of game animals or bird species?			Х		No	5b.		
c. Changes in the diversity or abundance of nongame species?			Х		No	5c.		
d. Introduction of new species into an area?		Х						
e. Creation of a barrier to the migration or movement of animals?		Х						
f. Adverse effects on any unique, rare, threatened, or endangered species?		Х						
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		Х						
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		N/A						
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		N/A						

Comment 5b. The proposed action is designed to increase the diversity and abundance of animal and bird species including game species.

Comment 5c. The proposed action is designed to increase the diversity and abundance of animal and bird species including nongame species. Species that depend on or frequent riparian areas will benefit due to improved habitat conditions. The western pearlshell mussel inhabits this reach of the North Fork. These mussels are sensitive to sediment and trampling, and this project would provide positive benefits to this specifies. The 3-strand electric riparian fence will allow terrestrial wildlife species access to and movement through riparian areas within project.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. Increases in existing noise levels?			Х		Yes	6a.	
b. Exposure of people to serve or nuisance noise levels?		Х					
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		Х					
d. Interference with radio or television reception and operation?		Х					

Comment 6a. The proposed action includes the use of heavy equipment that may temporarily increase existing noise levels. All equipment will have properly functioning noise reduction equipment to limit noise levels. The project is located in a remote area, and no residences exist within the project boundary.

7. LAND USE	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			Х		No	7a.	
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		Х					
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		Х					
d. Adverse effects on or relocation of residences?		Х					

Comment 7a. The project seeks to promote native vegetation in the riparian corridor within the project area. The riparian fence will provide the infrastructure to implement a grazing management plan where livestock is rotated through the riparian corridor. The riparian fence will reduce the duration of grazing in the riparian corridor. This will be offset by increased forage production from rest, recovery, and improved plant vigor of the native forage species.

The project includes a section of state Land (T1S, R16W, Sec36). The DNRC will not adjust the Animal Unit Months (AUMs) or current price for the grazing lease even with the implementation of the rest rotation grazing management plan.

8. RISK/HEALTH HAZARDS	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			Х		Yes	8a	
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		Х					
c. Creation of any human health hazard or potential hazard?		Х					
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		N/A					

Comment 8a. Weed treatment and the storage and mixing of the chemicals would be in accordance with standard operating procedures and under the guidance of the FWP Integrated Noxious Weed Management Plan.

9. COMMUNITY IMPACT	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		Х					
b. Alteration of the social structure of a community?		Х					
c. Alteration of the level or distribution of employment or community or personal income?			Х		No	9c.	
d. Changes in industrial or commercial activity?		Х					
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		x					

⁹c.Project will have positive economic impacts by hiring contractor/ laborers to complete work. Hiring process will be completed through competitive state contracting process. Project will also facilitate a sustainable and ecological grazing plan.

10. PUBLIC SERVICES/TAXES/UTILITIES				IMPACT *		
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:			X		Yes	10a.
b. Will the proposed action have an effect upon the local or state tax base and revenues?		Х				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		Х				
e. **Define projected revenue sources		Х				
f. **Define projected maintenance costs.		Х				

Comment 10a. FWP will monitor response of vegetation, habitat, and fish and wildlife species. FWP will also develop and monitor the grazing plan and noxious weed management plan. All of the necessary monitoring and management activities are included in the Landowner Site Specific Conservation Plans for the Big Hole Arctic Grayling Candidate Conservation Agreement with Assurances Program. FWP monitoring will include both the private land and the state trust land (Section 36, T1S, R16W) managed by the DNRC.

The electric fence will be powered from an existing source that will be connected through the local electric cooperative. The landowner will be responsible for paying the electrical costs after the system is hooked up.

** 11. AESTHETICS/RECREATION	IMPACT *						
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index	
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		х					
b. Alteration of the aesthetic character of a community or neighborhood?			Х		Yes	11b.	
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)		х					
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.)		N/A					

Comment 11b. The proposed action may negatively affect aesthetics during project construction because of ground disturbance and the presence of heavy equipment. These negative effects would be relatively short-term. Proposed action is expected to have long-term positive impacts to aesthetics of stream and riparian corridors. Anglers, hunters, and recreationists will benefit from this project from the improved aesthetics characteristics of this reach as well as the improved habitat and benefits to fish and wildlife species.

12. CULTURAL/HISTORICAL RESOURCES	IMPACT *							
Will the proposed action result in:	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index		
a. **Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?			Х			12a		
b. Physical change that would affect unique cultural values?		Х						
c. Effects on existing religious or sacred uses of a site or area?		Х						
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)		N/A						

Comment 12a. A cultural inventory of the project area was conducted on May 13, 2009, by Patrick Rennie (Montana Department of Natural Resources and Conservation). The results of this inventory were summarized and provided to State Historical Preservation Office in June 2009. During the course of inventory, no paleontologic resources were identified, and no archaeological investigative work was recommended. The inventory finding was that the proposed undertaking had a finding of No Effect to Historic/Heritage Properties. If any cultural artifacts are identified or disturbed during the construction of this project, all ground-breaking activities will be halted and SHPO will be contacted immediately for guidance on how to proceed with the project.

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT *							
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)			х		Yes	13a.		
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		х						
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		x						
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		x						
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		х						
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)		N/A						
g. **** <u>For P-R/D-J</u> , list any federal or state permits required.		N/A						

Comment 13a. Project is expected to have positive impacts to stream function, fish and wildlife habitat and diversity and abundance of numerous fish and wildlife species including fluvial Arctic grayling

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency: FWP will be responsible for hiring contractor to complete described work.

PART III. PUBLIC PARTICIPATION

1. Public involvement:

The public will be notified through publication in The Dillon Tribune and The Montana Standard and through contact with the local watershed and sports groups. This EA will also be published on the Montana Fish, Wildlife & Parks web page (http://fwp.mt.gov/default.html). Public comments can be given at the FWP web page, or in writing to: James Magee, Montana Fish, Wildlife & Parks, 730 N. Montana St., Dillon, MT 59725, or email: mageejames@mt.gov. Comments on the EA will be accepted until 5:00 pm, on August 21, 2009. This level of public involvement is believed adequate for the proposed project.

2. Comment period:

The public comment period for this proposed action is from to 5:00 pm on August 7, 2009 to 5:00 pm on August 21, 2009. Written comment can be mailed to:

James Magee Montana Fish, Wildlife & Parks 730 N. Montana St. Dillon, MT 59725

Comments can also be sent by email to: mageejames@mt.gov

PART IV. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action. FWP concluded from this review that the proposed activities would have a positive impact on the physical and human environment and pose minimal negative effects to the resources. Any minor affects to the physical environment will be short-term and can be mitigated below significance. Long-term consequences of the proposed action will benefit native fish species and their habitat as well as avian, amphibians, and other wildlife species that frequent the area. Therefore, an EIS is not required and an EA is the appropriate level of analysis of the proposed action.

2. Person responsible for preparing the EA:

James Magee – Fisheries Biologist 730 N. Montana St., Dillon MT 59725 406-683-2675

3. List of agencies consulted during preparation of the EA:

Montana Fish, Wildlife & Parks – Fisheries Division and Legal Bureau Montana Department of Natural Resources and Conservation

References:

Paige, C. 2008. A landowner's Guide to Wildlife Friendly Fences: How to Build Fence with Wildlife in Mind. Landowner/Wildlife Resource Program, Montana Fish Wildlife and Parks, Helena, MT 44 pp,